

# Mental Math: Adding

P 2-1

Add. Use mental math.

1.  $89 + 46$

2.  $301 + 61$

3.  $400 + 157$

4.  $722 + 158$

5.  $523 + 223$

6.  $804 + 396$

7.  $299 + 206$

8.  $878 + 534$

9.  $1,000 + 7,000$

10. Reasoning How can you write  $52 + (8 + 25)$  to make it easier to add?

Use mental math to find the cost of a pound of

11. apples and a pound of oranges.

12. bananas and a pound of grapefruits.

Fruit	Price per Pound
Apple .....	\$0.67
Orange .....	\$0.98
Banana .....	\$0.45
Grapefruit .....	\$0.82

## Test Prep

13. Stanley has \$10.00. He buys bread for \$3.47 and orange juice for \$2.53. How much money does Stanley have left?

A. \$3.00

B. \$4.00

C. \$6.53

D. \$8.47

14. Writing in Math Explain how you could add  $678 + 303$

using mental math.

Name \_\_\_\_\_

# Mental Math: Subtracting

P 2-2

Subtract. Use mental math.

1.  $53 - 21 =$  \_\_\_\_\_
2.  $101 - 49 =$  \_\_\_\_\_
3.  $224 - 26 =$  \_\_\_\_\_
4.  $568 - 352 =$  \_\_\_\_\_
5.  $120 - 33 =$  \_\_\_\_\_
6.  $900 - 187 =$  \_\_\_\_\_
7.  $141 - 98 =$  \_\_\_\_\_
8.  $409 - 11 =$  \_\_\_\_\_
9.  $554 - 59 =$  \_\_\_\_\_

**10. Number Sense** To subtract 37 from 462 using mental math, you first subtract 40 from 462 and get 422. What should you do next to get the final answer?

\_\_\_\_\_

Use mental math to find the difference in height between

**11.** Angel and Tugela.

\_\_\_\_\_

**12.** Yosemite and Cuquenan.

\_\_\_\_\_

## Test Prep

**13.** Dana has 205 cm of ribbon. She uses 64 cm of ribbon to tie a package. Which simpler problems could she use to find out how much ribbon she has left?

- A.  $205 - 60$  and  $145 - 4$
- B.  $205 + 64$  and  $269 + 1$
- C.  $205 - 60$  and  $145 + 4$
- D.  $200 - 64$  and  $136 - 5$

**14. Writing in Math** Explain how you would count on to find  $350 - 156$ .

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Name	Height (meters)
Angel	979
Tugela	948
Yosemite	739
Cuquenan	610

**World-Class Waterfalls**

Name \_\_\_\_\_

# Estimating Sums and Differences

P 2-3

Estimate each sum or difference.

1. 
$$\begin{array}{r} 627 \\ + 95 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 829 \\ - 292 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 987 \\ - 233 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 1,568 \\ + 352 \\ \hline \end{array}$$

5.  $4,263 - 1,613$  \_\_\_\_\_
6.  $7,502 + 2,187$  \_\_\_\_\_
7.  $24,141 - 2,177$  \_\_\_\_\_
8.  $64,099 - 55,555$  \_\_\_\_\_
9.  $83,595 + 18,999$  \_\_\_\_\_

10. About how much larger is the largest ocean than the smallest ocean?
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

Ocean	Area (million sq km)
Arctic Ocean	13,986
Atlantic Ocean	82,217
Indian Ocean	73,481
Pacific Ocean	165,384

Ocean Area

11. About how many million square kilometers do all the oceans together cover?
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

## Test Prep

12. Mallory is a pilot. Last week she flew the following round trips in miles: 2,020; 1,358; 952; 2,258; and 1,888. Which of the following is a good estimate of the miles Mallory flew last week?
- A. 6,000 mi      B. 6,800 mi      C. 7,600 mi      D. 8,600 mi
13. **Writing in Math** Explain how you would use front-end estimation to subtract 189 from 643.
- \_\_\_\_\_
- \_\_\_\_\_

# Column Addition

Add.

Name \_\_\_\_\_

1. 
$$\begin{array}{r} 486 \\ + 875 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} \$43.34 \\ + 49.48 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 938 \\ + 1,487 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 7,226 \\ + 1,587 \\ \hline \end{array}$$

5. 
$$\begin{array}{r} \$542.36 \\ + 2.23 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} 80 \\ + 960 \\ \hline \end{array}$$

7. 
$$\begin{array}{r} \$279.87 \\ + 20.96 \\ \hline \end{array}$$

8. 
$$\begin{array}{r} 8,738 \\ + 5,234 \\ \hline \end{array}$$

9. **Number Sense** Luke added  $429 + 699 + 314$  and got 950. Is this sum reasonable?

10. What is the combined length of the three longest glaciers?

11. What is the total combined length of the four longest glaciers in the world?

Glaciers	Length (miles)
Lambert-Fisher Ice Passage	320
Novaya Zemlya	260
Arctic Institute Ice Passage	225
Nimrod-Lennox-King	180

World's Longest Glaciers

12. Which is the sum of  $3,774 + 8,276 + 102$ ?

- A. 1,251      B. 12,152      C. 13,052      D. 102,152

13. **Writing in Math** Leona added  $6,641 + 1,482 + 9,879$ . Should her answer be more than or less than 15,000?

## Test Prep

# Choose a Computation Method

PS 2-8

**Bicycling Races** Carsonville holds a weekend of bicycling races each year, with one race on Friday and another race on Saturday. 1. On Saturday, 48,312 people attended the race. The Friday before, 46,754 people attended. How many more people attended the race on Saturday than on Friday?

2. About 49,000 people attended each race in 2000 and about 47,500 people attended each race in 1999. About how many more people attended each race in 2000 than in 1999?

3. The three highest attendance figures for 2000 were 51,975; 54,389; and 49,989. What is the total of these three figures?

**Hardware Store** Jim went to the hardware store and bought three flower pots for \$19.99 each. He also bought three plants, one for each pot. The first plant cost \$12.49, the second cost \$8.49, and the third cost \$17.60.

4. What was the total cost of the three pots?

5. What was the total cost of the three plants?

6. How much more did the pots cost than the plants?

7. **Writing in Math** If salad dressing cost \$0.17 per ounce, how much would a 6 oz bottle cost? Explain your answer.

Name \_\_\_\_\_

# Choose a Computation Method

P 2-8

Add or subtract. Tell what method you used.

1.  $\begin{array}{r} \$5,749 \\ + 8,274 \\ \hline \end{array}$

2.  $\begin{array}{r} 84,936 \\ - 27,946 \\ \hline \end{array}$

3.  $\begin{array}{r} 70,000 \\ + 30,000 \\ \hline \end{array}$

4.  $\begin{array}{r} 56,935 \\ + 3,964 \\ \hline \end{array}$

5.  $\begin{array}{r} \$95,629 \\ - 7,846 \\ \hline \end{array}$

6.  $\begin{array}{r} 26,000 \\ - 4,000 \\ \hline \end{array}$

7.  $\$3,210 - \$1,989 =$  \_\_\_\_\_

8.  $4,440 + 560 =$  \_\_\_\_\_

9. An African elephant weighs 11,023 lb. An Asian elephant weighs 8,818 lb. What is the total combined weight of an African elephant and an Asian elephant?

\_\_\_\_\_

10. A hippopotamus weighs 4,409 lb. A white rhinoceros weighs 4,850 lb. How much less does the hippopotamus weigh than the white rhinoceros?

\_\_\_\_\_

## Test Prep

11. Which number sentence is easiest to compute using mental math?

- A.  $1,502 - 685$     B.  $1,530 + 120$     C.  $652 + 989$     D.  $1,596 + 3,628$


12. **Writing in Math** Explain how you would use mental math to find  $1,201 + 8,793$ . Solve.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**6-2-9 d**

2. 

3. 5, 8, 11, 14, 17, \_\_\_\_\_, \_\_\_\_\_

4. 4, 6, 10, 16, 24, \_\_\_\_\_, \_\_\_\_\_

6.  $11 = 1 + 10$

$$101 = 1 + 101$$

$$\frac{\quad}{\quad} = 1 + 000'1$$

$$\frac{1}{10,000} = 1 + 0.0001$$

7. Sally went to purchase tiles for her kitchen floor. She measured the floor to find how many tiles she needed to cover the floor. Sally decided to make a pattern. She chose 10 red tiles,

Sally decided to make a pattern. She chose 10 red tiles,

20 beige tiles, 30 white tiles, \_\_\_\_\_ black tiles, and \_\_\_\_\_

gray tiles to complete a pattern for the kitchen floor.

**8. Reasoning** Fill in the missing amounts to update Carl's savings passbook.

Date	Deposit	Balance
4/7	\$25	\$945
4/14		\$995
4/21	\$25	
4/30	\$50	
5/7		\$1,095

## Carl's Savings Account

Name \_\_\_\_\_

**PROBLEM-SOLVING SKILL**

**P 2-10**

**Translating Words to Expressions**

Write a number expression for each phrase.

1. 1,285 is how much more than 622?

2. \$402 increased by \$86

3. 946 beads, then 80 fewer beads

4. 12 adults combined with 26 children

Write a number expression and then solve.

5. How many people do the 8 in. salad bowl and the 12 in. salad bowl serve together?

6. How much more money does the 12 in. salad bowl cost compared to the 10 in. one?

Write a number expression for the situation.

7. The bicycle museum had 220 fewer visitors this month than last month, when 980 people visited. How many people visited the museum this month?

8. **Writing in Math** Write a word problem that can be solved using the expression  $96 - 23$ .



Name \_\_\_\_\_

# Matching Words and Number Expressions

Choose the number expression that matches the words. Then, find its value.

1. Jaleesa made 24 blueberry muffins. She gave 10 muffins to her friends. Then Jaleesa made 2 more muffins.

$$24 - (10 + 2) \text{ or } (24 - 10) + 2$$

2. Antoine brought 24 bottles of juice to the picnic. The 14 people at the picnic each had 1 juice with their lunch. After the kids played soccer, Antoine's dad arrived with 12 more bottles of juice.

$$(24 - 14) + 12 \text{ or } 24 - (14 + 12)$$

Choose the number expression that matches the words. Then, find its value.

3. Saturn has 18 moons, Jupiter has 16 moons, and Neptune has 8 moons. How many more moons do Saturn and Jupiter have combined than Neptune?

$$(18 + 16) - 8 \text{ or } 18 + (16 - 8)$$

## Test Prep

4. Which of the following is the value of the number expression  $50 - (17 + 18)$ ?

- A. 25      B. 20      C. 15      D. 10

5. **Writing in Math** Explain which operation you would do first in the expression  $47 - (17 + 12)$ .

# Evaluating Expressions

P 2-12

Name \_\_\_\_\_

Evaluate each expression for  $y = 15$ .

1.  $y + 15$

2.  $y + 39$

3.  $85 - y$

4.  $51 - y$

Find the missing numbers in each table.

5.

$n$	$n + 35$
2	
10	45
15	
95	

6.

$x$	$75 - x$
9	
25	50
35	
52	

7. Kiara saved \$27. She bought her mother a gift. She has \$13 left. How much did she spend on the gift?

8. Carlos had 11 cans of paint. He used 4 cans painting the garage. He bought 2 more cans. How many cans of paint does Carlos have now?

## Test Prep

9. Which is the value of  $a + 235$  when  $a = 150$ ?

- A. 85      B. 150      C. 385      D. 485

10. Writing in Math Explain how to evaluate  $44 + x$  for  $x = 34$ .

Name \_\_\_\_\_

## PROBLEM-SOLVING APPLICATIONS

### A Piece of History

The Statue of Liberty, located on Liberty Island in New York, was given to the United States as a present from France on July 4, 1884. The statue was still in France at the time. It was taken apart and then shipped in sections to the United States in 1885. A total of 350 pieces of the statue were shipped on the French transport ship *Isere*. The pieces were shipped in a total of 214 crates.

1. Suppose that, after arriving in the United States, it took two days to remove the first 108 crates. How many crates were still on the ship?

2. Suppose four different pieces of the statue had the following weights: 4,219 lb; 3,182 lb; 876 lb; and 1,215 lb. Find the total weight of the four pieces.

3. Admission to the Statue of Liberty is free. In 2002, the price for three adults to ride the ferry round trip was \$21. The price for five adults was \$35. What is the round-trip price for one adult?

4. Suppose there are 13 children who take the ferry during one trip to the Statue of Liberty. A total of 51 people take the trip. Write a number sentence to find the number of adults who take the ferry. Solve. Write your answer in a complete sentence.

Name \_\_\_\_\_

**Algebra Cadabra!**Find the value for  $x$  in the following exercises.

1.  $x + 7 + x = 15$

2.  $6 + 8 - x = 11$

3.  $6 + x + 6 = 15$

4.  $23 - 7 - x = 9$

5.  $10 + 4 + x = 22$

6.  $25 - x - x = 15$

7.  $12 + 24 - x - x - x - x = 18$

8.  $x + 5 + x + 4 = 27$

9.  $x + x + x - 4 - 3 - 2 = 12$

10.  $14 + x - 11 - x + x - 3 = 1$

11.  $29 + 31 + 40 - x - x - x - x - x = 0$

12.  $x + x + x + x + 6 + x + 4 + x + 9 + x = 67$

13.  $9 - 1 + x + 4 + x + x - 5 + x + x + x = 61$

14.  $x - 5 + x - 8 + x + x + 3 + 12 + 10 + x + x = 72$

15.  $46 - 3 + x + x + x + x + x + x + x - 15 = 42$

Name \_\_\_\_\_

# Estimating Sums and Differences

PS 2-3

Rounding to the nearest hundred thousand,  
about how big would the combined areas  
be of

1. Alaska and Texas?

State	Area
Alaska	657,000
California	269,000
Texas	164,000
Montana	147,000

Area (in mi<sup>2</sup>) of U.S. States

2. Texas and California?  
  
3. About how much larger is Alaska  
than Montana?  
4. About how much larger is  
California than Montana?

Rounding to the nearest ten thousand,  
about how many more people live in  
5. Montana than Alaska?

State	Population
Montana	902,000
Alaska	627,000
Wyoming	494,000

Population of U.S. States

6. Montana than Wyoming?  
  
7. Alaska than Wyoming?

8. **Writing in Math** Explain how you would use front-end estimation  
to find the total population of Montana and Wyoming.

1. Estimate the DIFFERENCE using rounding.  
 Sam had **2,349** rocks in his collection. He lost **1,100** rocks. About how many rocks are in his collection now?

2. Estimate the sum of:  
 $4,733 + 3,324 =$

- a. 7,000  
 b. 8,000  
 c. 9,000  
 d. 10,000

3. Estimate the difference of:  
 $7,823 - 5,209 =$

- a. 2,000  
 b. 4,000  
 c. 2,500  
 d. 3,000

4. Estimate the Sum using rounding.  
 Betty had **311** shells. She picked up **265** more. About how many shells does she have now?

5. Add:

$$\begin{array}{r} 51,604 \\ + 6,225 \\ \hline \end{array}$$

- a. 57,828
- b. 57,829

- c. 59,298
- d. 55,82

6. Add:

$$\begin{array}{r} \$28.22 \\ + \$35.78 \\ \hline \end{array}$$

- a. \$64.90
- b. \$65.00

- c. \$64.00
- d. 6,400

7. Find:

$$\$29.57 + \$24.12 + \$8.23 + \$4.41 =$$

8. Subtract:

$$\begin{array}{r} 62,374 \\ - 23,472 \\ \hline \end{array}$$

- a. \$33.66
- b. \$66.33

- c. \$44.11
- d. \$23.45

- a. 85,846
- b. 40,453

- c. 38,902
- d. 55,825

9. Subtract

$$\begin{array}{r} \$30.11 \\ - \$7.85 \\ \hline \end{array}$$

- a. \$22.26
- b. \$23.62
- c. \$26.22
- d. 2,226

10. Greg had 485 toy tractors. 259 of them were brand new. How many tractors are old?

What computation number sentence will solve the problem?

- e.  $259 \times 485$
- f.  $485 - 259$
- g.  $485 + 259$
- h.  $259 - 259$

11. Add

$$7,000 + 700 + 70 =$$

12. John went to the store and bought a movie for \$18.75. He gave the cashier \$20.00. How much change should he receive?



1. What are the next 3 numbers in this pattern?

13, 15, 17, 19, \_\_\_\_\_

2. Which shape should replace the exclamation point in the pattern below?



3. What is the next 3 numbers in the pattern?

0, 5, 15, 30, \_\_\_\_\_

4. Look for the pattern. Write the next 3 numbers?

3, 9, 15, \_\_\_\_\_

5. Write the number expression for the word problem below.

Jim had 135 baseballs. He gave 66 away. Then, he got 8 more.

6. Write a number expression for the phrase.

75 increased by 50

7. Write a number expression for the phrase.

32 less than 75 books

8. Write the number expression that shows how much money he has left?

Kyle went to the football game with \$32 to spend. He spent \$4.99 on a hotdog and \$15.01 for a tee shirt.

9. Write the number expression that shows how many cars he has in his collection. Jim has 17 cars in his collection. He bought 24 more. Then he gave 13 to his father.

10. Complete the equation by filling in the blank with the correct number.  
 $481 + \underline{\hspace{2cm}} = 525$

11. Complete the equation by filling in the blank with the correct number.  
 $\underline{\hspace{2cm}} - 37 = 577$

12. Choose the correct answer to solve the equation.  
 $610 + \underline{\hspace{2cm}} = 722$

13. Write the number expression that shows how much money she has left? Kati went to the toy store with \$30 to spend. She bought a video game for \$15.35. Then she bought a Barbie for \$10.84.

14. Write the number expression that shows how many coins he has in his collection. Steve has 22 coins in his collection. He found 2 more. Then he sold 5 to the museum.

15. Write the number expression for the phrase.  
7 apples combined with 4 oranges.

16. Write the number expression for the phrase.  
\$28 minus \$19